

CLAIM OR CLAIMS

1. A continuous process for removing volatile siloxane oligomers from an emulsion containing siloxane polymers and volatile siloxane oligomers prepared by emulsion polymerization of volatile siloxane oligomers comprising continuously feeding the emulsion to a continuous flow device for vaporizing liquids, continuously feeding a stripping gas to the continuous flow device, continuously removing an overhead fraction of volatile siloxane oligomers from the continuous flow device, and continuously removing an unvaporized bottom fraction from the continuous flow device of an emulsion containing siloxane polymers which is substantially free of residual volatile siloxane oligomers used to prepare the emulsion.

2. A process according to Claim 1 in which the continuous flow device for vaporizing liquids is a unit selected from the group consisting of climbing thin film evaporators, falling thin film evaporators, spinning disc film evaporators, spinning band columns, agitated thin film evaporators, horizontal wiped film evaporators, vertical wiped film evaporators, units with climbing and falling films, packed columns, and plate columns.

3. A process according to Claim 1 in which the stripping gas is selected from the group consisting of steam, nitrogen, air, argon, and mixtures thereof.

4. A process according to Claim 1 in which a temperature of 70-110 °C is maintained in the continuous flow device for vaporizing liquids.

5. A process according to Claim 1 in which the process is continued until the emulsion in the unvaporized bottom fraction being continuously removed from the continuous flow device for vaporizing liquids contains less than 0.18 parts by weight of the volatile siloxane oligomer per unit weight of the siloxane polymer in the emulsion.

6. An emulsion prepared according to the process defined in Claim 1 in which the viscosity of the siloxane polymer in the emulsion before the emulsion is fed to the continuous flow device is substantially the same as the viscosity of the siloxane polymer in the emulsion after the emulsion is removed from the continuous flow device.

7. A method of treating a surface or substrate selected from the group consisting of hair, skin, paper, and textile, comprising applying to the surface or substrate the emulsion prepared according to the method defined in Claim 1.

Patented Oct 22 1968